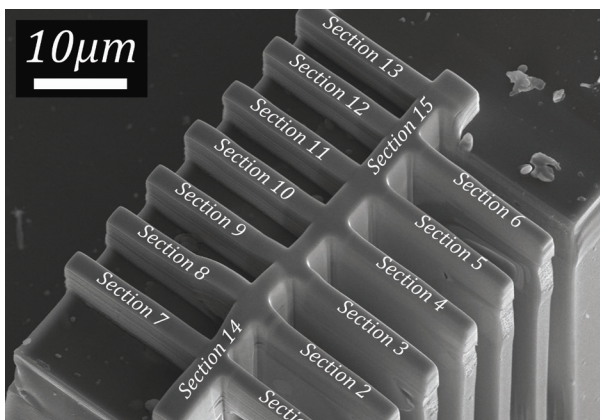


Planetary Sample Analysis and Mission Science

The Planetary Sample Analysis and Mission Science Laboratory, or PSAMS, is a national facility at NASA Johnson Space Center. PSAMS collocates unique laboratory capabilities and world class scientific staff and technicians with NASA's astromaterials sample collections to provide a research venue unlike any other. Astromaterials sample analysis, experimentation, modeling, and data integration occur beneath one roof, providing exploratory opportunities otherwise available only through visits to other worlds.



Unique mass spectrometry laboratories.



Planetary sample optimization techniques.

Sample Optimization

Handling and curation techniques developed through a fifty-year research heritage, combined with cutting-edge technology, optimizes the utilization of precious samples for highly precise measurements.

Coordinated Sample Analysis

A multistep process in macro, micro, and nano-analysis for major, minor, trace elemental and isotopic compositions.

Isotopes and Geochemistry

Spectroscopy, spectrometry and chromatography to provide insight into radiogenic, stable, and non-traditional isotopes, and minor and trace elements.

Organic Geochemistry and Exobiology

Customized mass spectrometry for any organic compound in a variety of materials, including a dual femtosecond laser time-of-flight mass spectrometer developed in house.

Planetary Process Simulation

In house impact facility, petrology (reaching up to Earth transition zone), soil chemistry and mineralogy analysis, solution chemistry, x-ray diffraction, and rover data to simulate past and present planetary processes.

Robotic Mission Analog Studies

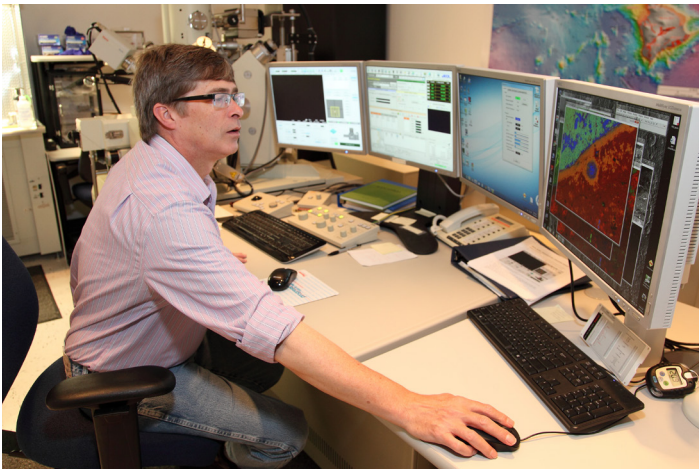
Flight-like equipment for development, calibration, and qualification of planetary instruments. Over 10,000 analog samples extensively characterized as well as cross-correlated across robotic missions.

End-To-End Investigation Capability

PSAMS enables multi-faceted, interdisciplinary investigations to maximize return on research, analysis, and mission investigations, also serving end-to-end needs from sample analysis through experimentation, modeling, and finally, integration with mission data. PSAMS provides customer-friendly agreements to streamline business relationships, as well as briefings at NASA Johnson or business sites.



Planetary Process Simulation.



Coordinated sample analysis to identify elemental compositions.



Extensively characterized analogs correlated to exploration mission findings.

National Aeronautics and Space Administration

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